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Abstract

Funded by both public and private agencies, Sesame Street, produced by the Children's Television Workshop, is an experimental series of televisicn prcgrams fcr 3- to 5-year-olds. The program is considered a complement and supplement to early education since 4/5 of the natich's ycung children dc nct attend preschcol, but do have television sets at home. Design and construction of the programs are guided by a research staff respcnsible fcr child-watching to determine what the child actually sees, hears, and learns when watching Sesame Street. The infcrmatich resulting from this fcrmative evaluation is used by producers tc improve programs. Cited fcr examples of teaching approaches altered because child-watching infcrmatich indicated changes were needed. (MS)

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Designing a Program for Broadcast Television

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On November 10th of this year, a series of 130, one-hour-long television programs for young children--an experimental series called Sesame Street--will begin broadcasting over the 170 educational channels distributed across the country.

With grants from both private and public agencies--Carnegie, Ford, The Office of Education, OEO, and the National Institute of Child Health and Human Development--a group called the Children's Television Workshop currently is producing this five-day-a-week, 26-week television programming for 3 through 5 year-old children, primarily but not exclusively from urban families, and then will assess the impact of viewing these programs on the development of these children. My observations today will focus on the role that child-watching--or formative evaluation--has been playing in guiding the design and construction of the television programs.

Sesame Street is not intended as a substitute for other forms of early childhood education--some of which you are hearing about in this symposium. Nor is it intended as a comprehensive program of early education. But there are some compelling facts about the television viewing of very young children which led us to consider national television programming as a complement and supplement--as one option to be added to other approaches to early education, an option that might achieve certain limited, selected goals quite well.

Television sets are in greater supply in American homes than bathtubs, telephones, toasters, vacuum cleaners, or newspaper subscriptions.

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Even in households with less than $5,000 dollar incomes, over 90% own at least one television set. For example, in the "hollers" of Appalachia, where the median income is about $3,000 dollars a year, and where homes are in such remote locations that preschool children can not possibly reach an organized school, over 95% of the families have at least one television set, and these sets are on for an average of over 50 hours a week. By the time a child born today reaches age 18, he will have devoted more of his life to watching television than to any other single activity except sleep.

Over four-fifths of the three and four year-old children in this country do not attend any organized form of school, but the television medium is used by these young children for enormous numbers of viewing hours. What can we do with its message to capitalize on the inherent fascination that television seems to hold?

Another compelling fact about television is its capacity to show children events that they have never seen before and are unlikely ever to have the opportunity to see in person. And these events, in sequence, can add up to stories. And these stories can contain and convey ideas. And with these stories and ideas, conceivably (with luck) we can touch the child and catch his imagination. We all know the power of the television medium to succeeed in that most difficult accomplishsment--catching the child's imagination--sometimes accidently and perhaps sometimes in ways that seem trivial or unworthy. But if we only can begin to understand what really moves a child and really excites him to want to know more about what he sees and hears, that would be an achievement worth any investment.

In J: The small bits of material that I can show you today to illustrate the role of formative evaluation in program design of course will be out of the context of the total show, which combines warm human beings (who treat each other and their viewers in a gentle, dignified way), with puppets, live-action films, and short, animated segments.

Anyone who has children knows--mostly to his anguish--how readily young children learn commercials, in which pace, style, repetition, and the use of jingles are key elements. We are experimenting with short commercials to teach letters and numbers, and here is one of our ealry efforts.

J. Commercial:

Out J: Now, we have had considerable criticism of that J commercial from adult audiences, who do not like the slang, the Judge hitting someone on the head, and the "negative attitude toward jails." More important, of course, were the reactions of young children, who take it simply as a nonsense rhyme--which is the way it was intended. They watch it and enjoy it, but some child-watching told us that, despite its ability to hold the child's attention, it was not a really effective teaching device. One of our premises is that entertainment and instruction can complement each other, but we now find from watching children that we sometimes create a competition between the two--that because the animated characters, for example, are so successful and appealing to the child, and draw his attention so strongly, he is distracted from the letter we are trying to present.

In Wanda the Witch: So the next approximation tried to maintain the appeal of animation, but to make the letter more salient to the child.

Wanda the Witch:

Out Wanda the Witch: An even more direct focussing of the child's attention on the material to be learned is achieved in this next segment. Here, the letter itself is an actor and the child has an opportunity to get a good, long look at it. You will also meet Kermit, an important member of our repertory company.

Kermit:

Out Kermit: Let me turn briefly to the role of formative evaluation in the design of children's television. The ultimate success of Sesame Street will depend upon the quality of the programs and the impact they have on children. But there already has been one highly successful result of this experiment. Children's Television Workshop has a research staff responsible for child-watching to get a detailed, moment-to-moment view of what goes on in the child's mind--what he actually sees and hears--when he is watching Sesame Street, and to convey this information to the producers of the show to guide their efforts to build progressively better shows. The remarkable achievement is this: the researchers and producers actually have learned a great deal about how to be useful to each other. The researchers not only have learned to make useful observations about what works or does not work with children, but to convey this information in a useable form to the producers. Equally remarkable is the producers' ability to absorb and use this information, and to ask reasonable questions of the research staff.

If any of you are interested in how this successful collaboration between researchers and producers is coming about, please contact Dr. Edward Palmer, who is Research Director at CTW and who is responsible for the Formative evaluation phase of its operation.

The general function, then, of formative evaluation is to serve production. As the shows have been developing, research is assessing both their appeal for children and what children learned from them. To accomplish this, Edward Palmer and his group have developed several techniques of child-watching, one simple but very effective one being the "distractor." Here, a child can watch either the television set or a television-size projection screen on which slides are changing constantly. Fluctuations in the child's attention are recorded and graphed, and then reviewed in detail with the producers.

These and other techniques of child-watching are yielding much specific information about program elements and some general understanding of children's viewing behavior: the roles of context, pace, and repetition; of familiarity and incongruity, the appeal of animation and pixilation (an old Buster Keaton, speeded-up action technique); the attentional drifts of the child and the cues he uses in deciding very selectively whether he should watch or not. When television sets are turned on for an average of 50 to 60 hours a week in the homes of young children, they must become highly selective in monitoring what to watch, and they do. For example, very rarely will a young child watch for long if an adult is on the screen talking full-face to him. In contrast, contrary to the ancient folklore among television producers, children do enjoy watching other children in action and listening to their talk.

In Round: Another effort--in this instance, an effort to teach the concept of "round"--illustrates some of these general observations through its relative failure. Although this segment does hold the children's

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attention and creates many images that they can recall and describe, it fails to teach the concept of round.

Round:

Out Round: In Over-Under: So, in attempting to teach another concept--over, under, and around--we added the action and language of children, with considerable repetition and redundancy.

Out Over-Under: To summarize, this is the first time that child-watching research has been applied systematically to the design of televised instruction for young children. This research is proving to be of great value, not only in improving the quality of a specific set of programs, but in generating some general understanding of how young children learn, what moves them, and what catches their imaginations.